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# GLEANINGS

A JOURNAL DEVOTED TO BEES AND HONEY AND HOME INTERESTS.

## BEE CULTURE

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No. II.



COLORADO State Bee-keepers' Association has 207 members. What other State can match it?

I NEVER WORE a plug hat, and couldn't be hired to wear one. And now just see what a deep-laid scheme the editor has concocted (p. 431) to inveigle me into wearing one of the abominations!

H. G. OSBURN reports taking 40,500 lbs. of honey with an increase to 105 colonies. That's a big thing in any case; but it makes a good deal of difference whether he started with 104 colonies or with 4, and he doesn't mention the number at start.

H. G. OSBURN and you are not so far apart as you think, Mr. Editor, p. 432, as to the working force of a colony. You are talking about the total population, and he's talking about the field force. You can tell that by his sending all afield.

VERY LEVEL-HEADED is this advice to beginners given by Editor York: "First get and read a good bee-book thoroughly, then get the bees. Then read your book again. Then you will be ready for a good bee-paper, and, very likely—more bees."

IF YOU CLIP the large wing of a queen on one side, it will change her looks so little that a hasty glance will not show that she is clipped at all. But just on that account I clip both wings on one side, for I want to see at a glance, as the queen runs over a comb, whether she is clipped or not.

L. STACHELHAUSEN, in *Southland Queen*, thinks it an error to teach that, because the winter in the South is warm enough for bees to fly more, bees consume more. They don't fly unless they can gather. From the last flower in fall to the first in spring, Southern bees consume less than Northern.

"HOW CAN QUEENS be forced to lay in queen-cell cups?" is given in *Southland Queen* as one of the topics for discussion at a

convention. Can they? [Forcing queens to lay in queen-cups—why, it seems to me we should do well if we could get them to lay, to order, in natural cups made by the bees themselves. In fact, I do not know that we are sure that they ever do so of their own sweet will under any circumstances.—ED.]

THE COLORADO foul-brood law is somewhat circumstantial. If you know of foul brood *anywhere*, and fail to report to the inspector or secretary of State association, you're subject to a fine of \$5 00. If you conceal the fact that your own bees have foul brood, you may be fined \$20 to \$50, or imprisoned one to two months. About right too. [I never noticed this provision in the law; but it is a very good one, and ought to be in every law designed to suppress foul brood or similar contagious diseases.—ED.]

I DON'T KNOW for sure all about it, but I *think* the old-comb discussion has been something like this: Some years ago it was the common thing across the ocean to teach that combs should be renewed when they became a few years old, and I do not remember that any on that side opposed such view. It was copied and commented upon here, and that started the discussion here. I don't know, but I suspect the discussion on that side arose from reading the discussions in American journals. But the advocacy of old-comb renewal is of trans-Atlantic origin.

THE BLUE-HEAD is a disease of the brood, named in *Deutsche Imker aus Boehmen*. Scattered among the sealed brood are pupæ, either unsealed or with holes in the sealing. The pupæ are dead, and have blue or white heads, or heads spotted white and blue. Turn the comb on its side, and many of these pupæ fall toward the opening. While the disease is not very malignant, and perhaps not contagious, the diseased colony makes poor headway. [Why, doctor, aren't you and those other people making a blunder? See what is said about "bareheaded" brood on page 57 of the A B C book. I should say there was nothing the matter with the pupæ at all, even if they do fall toward the opening when you tip the comb over. I have seen exactly what you describe, and have kept careful watch, and the

bees hatched out all right just as well as those that were capped over.—A. I. R.]

ARTHUR C. MILLER has the joke on me. On p. 325 I quote him saying, "If there is any class of people who seem prone to only half observe and to jump at conclusions, it is the bee-keepers," and then I reproach him by saying that, if he would "observe" more carefully himself he would find the observers all right, but the things observed, elusive. Now he comes back at me by saying that, if I had "observed more carefully" myself I would have seen that he made that identical remark right after the words I had quoted. And I don't know of any satisfactory reply to make.

SWARTHMORE, in *Rocky Mountain Bee-Journal*, reports success in obtaining early drones last year, by having drone eggs mailed to him from the South, and giving these eggs to queenless colonies. If eggs can be successfully mailed, there might be a traffic in eggs from choice queens for queen-rearing. [Something like twenty years ago we used to send worker-eggs from a choice queen by mail, and succeeded in doing it very nicely up to a distance of 100 miles; but beyond that we never had any success. I should have said that it would be impossible for Swarthmore to get drone eggs that would hatch, from a distance of three hundred miles.—ED.]

THE QUESTION whether extracting-combs should be cleaned out by the bees in the fall has had a thorough discussion in *Revue Internationale*. Reviewing the testimony, J. Crepieux-Jamin says it is remarkable that the advocates for fall cleansing offer the sole argument that the honey not cleaned out will ferment. The chief argument on this side, I think, is the granulation of particles left to hasten granulation in the next year's crop—an argument of double weight when applied to unfinished sections. [I think the only reason why we in this country prefer to have our extracting-combs cleaned out by the bees is, as you suggest, to prevent the accumulation of particles of granulated honey. But in Europe there may be localities where these wet combs will ferment.—ED.]

SOMETIMES it is said that a beginner gets a yield of honey that he never after equals, because his first enthusiasm is gone. I believe that's a libel on many of the veterans. A bee-keeper may ride his hobby so hard as to kill it, but they don't all do it. Just forty years ago I took the bee-fever, and the temperature is just as high now as it was then. I'm looking forward to some things I want to do with bees next summer with just as keen a relish as I had forty years ago. The extra results achieved by a beginner are largely to be credited to the fact that he has a small number of colonies, and so the bees have a better harvest. [Your last sentence explains it. In the A B C book the statement is made to the effect that the average yield per colony will be much larger in a small apiary, remote from any other yard of bees, than in larger apiaries.—ED.]



Four weeks ago we shoveled snow  
That drifted deep all over;  
And now to-day where frost held sway  
We move great heaps of clover.

"Diseases of Bees and Legislation" is the succinct title of the report of N. E. France, Foul-brood Inspector of Wisconsin. It consists of an exceedingly detailed description of foul brood in all stages, together with the best known methods to arrest its ravages. It also treats on pickled brood and black brood, and dysentery and other diseases of the bees, and gives an account of the present state of legislation relative to these diseases in the United States. The subject of adulterated honey is well treated. No price for the book is given. All wishing a copy should apply to Mr. N. E. France, Platteville, Grant Co., Wis.

Mr. F. Greiner writes:

The Bee-keepers' Society of Erfurt, Germany, will hold its 50th anniversary this summer. An interesting exhibition is planned in connection with this convention or celebration. Bee-keeping of a hundred years ago is to be shown. One hundred and fifty stands of bees will be on the ground; which will be prepared and started for the heath in Thuringia at the close of the festivities. A portable apiary of 30 colonies (wanderwagen) will also be on exhibition.

Mr. Greiner also adds the following relative to an improvement in comb foundation:

Lorenz Horvat, of Austria, speaks of a new style of comb foundation in a recent number of the *Centralblatt*. He describes it as having *notched* cell-walls instead of the smooth, and says, when this new foundation was first brought out the claim was made that the bees would more readily draw it out into combs, but he did not take much stock in it. Since then a test has been made at a bee-keepers' institute, held at Vienna last summer, as follows: Three brood-frames were filled with new-style, three others with old-style foundation. The six were inserted in the brood-nest of a good colony, bees between brood-combs, alternating them with the frames of foundation. When an examination was made 24 hours later, it was found that the three frames of new-style foundation had been drawn out into combs, and eggs had already been deposited in a few cells. The three forms of ordinary foundation had hardly been touched by the bees, although they had been given an equally favorable position in the hive. A number of trials of this kind were made, but turned out practically the same in each instance.

Our thanks are due to E. N. Eaton, State Analyst of Illinois, for a copy of the report of the State Food Commissioner, Mr. Alfred H. Jones. As a copy of it can be had (free, I think) by addressing the Illinois State Food Commission, Room 1623, Manhattan Build'g, Chicago, it will not be necessary to say much about it, except that it shows the result of the analyses of nearly every thing used as food in that State (or perhaps all States), such as milk, cheese, extracts, butter, ice, honey, vinegar, etc. Even a hasty glance at its pages shows a very strange feature of our life. It seems as if adulteration of the most unblushing kind were the fate of nearly every thing the people of Illinois get to eat. Of course

this is not really the case, but it is true to a fearful extent, as the laws against adulteration fully attest. Fortunately sugar and flour seem to get to us in a pure state, as their adulteration is difficult, and the things themselves are about as cheap as any adulterant could be. Liquor-sellers have long been styled the "poisoners-general" of the people; but they must certainly share that honor with the adulterators of food-stuffs which all *must* buy, while they *can* get along without the liquor. Mr. Eaton will be remembered with gratitude by bee-keepers as the one who made such a vigorous attack on the adulterators of extracted honey in Chicago two years ago. Concerning this matter I quote the following:

Pure honey may be defined as the nectar of flowers, transformed, and stored in a comb by the honey-bee. Extracted or strained honey is the same article removed from the comb by man, usually by centrifugal force. Comb honey can be adulterated only by the bee, which seems to have a patent on capping the cells. Extracted honey, next to vinegar, is more universally adulterated than any other staple food products.

In Minnesota, before the honey clause was added to the Food Statute, about 83½ per cent of extracted honey proved to be adulterated. In Illinois, about the same ratio of adulteration was proven to exist. Last year a committee acting for the National Bee-keepers' Association secured a large number of samples in Chicago. Being at that time employed in commercial work I examined the samples for the Association and found that more than 50 per cent were adulterated. This month (Dec. 1900) finds extracted honey again seeking the winter trade. Inspector Mrs. Frank Hubbard has visited many stores in Chicago, and reports finding very much less extracted honey offered than the year before. This is owing to the enforcement of State law requiring the labeling of adulterated honey, thus driving a dishonest competitor from the market. While none of the samples taken this winter have as yet been analyzed, many of them are of those brands which proved genuine in former analyses.

The most common adulterant of honey is glucose, although adulteration with cane sugar and invert sugar is possible, and sometimes practiced. The adulteration thus far discovered on the Illinois market has been of the cheapest and most gross kind—glucose flavored with a small slice of honey in comb.

See also page 652, 1899.



### STARTING BEES INTO SECTIONS.

Hiving Swarms on Full Combs and Starters; Hive-Covers; some Peculiarities of the Colorado Climate; Wetting Sections for Folding.

BY M. A. GILL.

In advising the use of an extracting-super to start to work in sections, are you not aware that thousands of us bee keepers do not have an extracting-super on the place? I would advise any bee keeper working for comb honey to exchange supers with colonies that are tardy about working in sections with one that has made a *good start*, and be sure to carry along some of the comb-builders (young bees) which are the last to leave the super. The colony given the super with full sheets of

foundation will at once resume work, from the force of the same habit you say they have acquired by the use of your extracting-super.

Dr. Miller asks you how many days after the extracting-super is given before they will start work in the sections. I would say that depends upon two conditions—namely—the condition in the brood-chamber, and the other condition in the field.

If the brood-chamber is full of brood, and running over with bees, and the conditions in the field are such that honey is coming in, they will start at once; otherwise they will wait until these conditions do exist, even if it takes all summer. I prefer to work for those conditions that force the bees into the sections, rather than to bait them, although I have just finished filling 500 supers with drawn comb for the first round.

On page 239 Dr. Miller advises using full combs and dummies to hive swarms upon. Some one has said starters for the expert, and full sheets of foundation for the novice, in hiving swarms, but never full frames of comb when working for comb honey. Somehow my experience just fits the above advice, and I feel like saying amen to it. If I have full combs for young swarms I cut them out and make them into wax, leaving from one to two inches of comb along the top-bar; this strip will be stored full of honey within a very few hours after hiving, and then you have just the proper condition for getting honey in the sections, for the bees will commence building comb upon each side of these narrow combs of stored honey, and the queen will occupy the new comb being built in the brood-combs; and the honey coming in is thus forced into the sections. I frequently get two supers of comb honey by the time the brood-chamber is filled.

Some will say I will get too much drone comb built. If the queens are old, and will perhaps be superseded that season, such will be the case. But there will be a time the next season, between hay and grass, which, in fact, is just the time for spreading brood, when these combs will be empty or nearly so, if kept at the outside of the hive; then take them out and exchange with full sheets of foundation. This is the only time I use full sheets in the brood-chamber when working for comb honey. The combs taken out are made into wax. There are certain times when the construction of comb is not as expensive as some have been led to believe. As a rule, I think bee-keepers could make much more wax than is made.

On page 233 you speak of a new cover you have adopted for hot climates. Along this line I wish to say that the best flat cover ever put out for this climate was the old ¾ inch thick, with grip on each end, and painted on both sides so as to be reversible. The Higginsville and Danz. covers are not the thing for this climate, and neither will be the cover you have adopted, as I understand it is simply your old flat cover covered with paper. Here we winter out of doors, and sealed covers are not the thing. With two or three thicknesses of burlap, and an air chamber, our bees win-

ter nicely. Again, we need the air-chamber badly, on account of the summer heat, as shade is not practicable here in many of our out-apiaries, and for my part I don't want it.

Last season I bought 100 of your Colorado covers. They gave the best of satisfaction during the summer, and every one of the 100 colonies under them has wintered nicely. Last season, during the heat of midday, when the bees would be driven out of the supers under flat covers, the supers under Colorado covers would be full of bees, and comb-building going on undisturbed. But there is too much wood surface and too many nail-heads for the sun to get at for them to last. Remember, there is no nail-puller invented like the Colorado sun. No wonder the microbes kink up their backs and quit when it strikes them. Why, I heard a "lunger" from the East say last summer that he dried out so that his shin bones and short ribs rattled when he walked.

What we want is some kind of cover with an air-chamber like the Colorado cover, and that covered with something to keep it from the sun. I have adopted a cover with a rim nearly like the Colorado cover, so as to give two inches of air-space, and covered with roofing-paper (Neponset), and painted two coats of lead and oxide of zinc. They are neat and attractive, water-proof, and I think they will stand, say, ten years, and perhaps longer. I have a notion to send you one.

I saw covers yesterday covered with old second-hand duck, and painted well, that have stood 12 years, and they are absolutely water-proof yet. They are made with  $\frac{7}{8}$ -inch rim and  $\frac{1}{2}$ -inch thick top, and poor lumber can be used.

In wetting sections I use a fountain syringe. Don't hang it too high; take the "shut off" in left hand to control the stream. In this way I can wet a crate of 500 sections, ready for immediate use in a moment, and can cut 500 (full sheet) starters with a miter-box and a sharp scalloped bread-knife in the same length of time.

Longmont, Col.

[I am well aware that many do not have extracting-supers. Perhaps the full-depth brood-nest might answer the purpose of drawing the bees above; but if I did not have extracting-supers I would get a few and use them exclusively for getting stubborn colonies to working upward. As fast as the combs are sealed I would extract them and put them back into use.

The new cover that we have in mind for hot or dry countries, and which we shall probably put out for another season, will be a good deal like the ordinary flat cover in appearance. It will consist of two thicknesses of boards about  $\frac{3}{8}$  inch thick, separated by three narrow strips of wood, one in each end and one in the middle. The top will then be covered with Neponset red-rope roofing-paper. On each end will be nailed the ordinary grooved cleats such as are used on flat covers that were sold so extensively a few years ago. The side edges of the paper will be held in place with side

cleats, and the top surface of the paper will be kept from wrinkling by means of large-headed tacks. When completed it will look very much like a single-board flat cover, except that it will be covered with paper. Such a cover will have the advantage of being light and strong, with dead-air spaces.

All that you say about the ability of the Colorado climate to pull nails out of hives and covers is too true. When I came back from your State I made up my mind that the covers and hives would have to be of special construction to stand such exacting conditions; and, as a consequence, we made a special cover for our Colorado trade. But if the beekeepers of your State would be willing to pay the price, it strikes me that drive-screws should be used instead of nails—I mean screws that are driven by means of a hammer. These, I think, would hold their place, providing, of course, the stuff had been properly seasoned in Colorado before nailing together. Stuff that is seasoned in the East, and then sent to Colorado, will season still more.

I am quite prepared to believe that a cover of duck well painted would last for years on hive-covers; but I see no reason why good roofing-paper like Neponset would not give equally good results, and save money in the investment. The perfect hive-cover for Colorado is yet to be made, I believe—yes, and for Cuba and all other countries that have special conditions that are very different from those of the northern part of the United States.—ED.]

## COMB HONEY—HOW TO LOAD ON WAGONS.

### Feeding Thin v. Thick Syrup in the Fall.

BY H. D. BURRELL.

I agree with Dr. Miller about the placing of hives of bees on wagons for moving, referred to on page 908, Dec. 1st; that is, the combs should extend *across* the wagon. On ordinarily good roads there is considerable side shaking to wagons; and if roads are rough or much cut up by ruts the side-to-side strain on combs is serious, as first one wheel and then another drops into a hole. With careful driving there are few sudden jars forward or backward, even when there are hills. In an experience of over 20 years I have moved a great many bees on wagons, distances varying from a few miles to over 25, and with very little injury to bees or combs. Formerly I thought it necessary to fasten loose hanging frames in hives, but soon found even that unnecessary, unless the combs had been handled and brace-combs broken a short time before the moving. In moving bees on cars the worst strain is endwise of the car, in starting and stopping, and the combs should be lengthwise of the car.

On page 869 the old subject of preparing syrup is referred to. Is it not possible that the inexperienced may be misled by such directions? In most localities there is more or less honey gathered from fall flowers, and in most cases it is not possible to tell how much

feeding will be necessary until this fall bloom is gone, often not till October. Then it would be hardly safe to feed thin syrup, and depend on the bees to ripen it into good winter stores. The nights then are usually cool, and bees work slowly; and it is not best to stimulate brood-rearing so late in the season. Very young bees are apt to winter poorly. One winter I had about 50 colonies starve after they had been fed with sugar syrup, which hardened in the combs. The thin syrup is all right fed slowly in August; but after Sept. 15th I would by all means feed a syrup of nearly the consistency of good ripe honey. About 10 lbs. of the best granulated sugar, boiled with 4 lbs. of water, is about right in my experience. To prevent granulation, mix thoroughly in at least a fourth as much good extracted honey, or, if that is not convenient, for each 10 lbs. of sugar dissolve in a little warm water one even teaspoonful of tartaric acid. Feed the syrup quite warm, and enough at one feed if possible.

South Haven, Mich.

[As to the matter of feeding where the food is to be given late in the fall, I have and do advocate making it thicker. But better—far better—feed early, and make the syrup *thin*.

Here is something further on the loading question, from Mr. Greiner.—ED.]

#### LENGTHWISE OR CROSSWISE.

BY F. GREINER.

In an article on moving bees, written for the *American Bee Keeper*, I made no special mention of how the hives should be placed on a wagon. I thought it was well understood that the combs should run crosswise of the wagon. I am somewhat surprised that the editor should think differently. The roads in and around Medina may be so excellent, and come so near the steel roads, that it is practical to carry the hives lengthwise, and he may, therefore, have come to the conclusion that *that* is the proper manner. Here with us, even when the roads are the finest, the side shake is more severe than the jerking endwise, and I would not think of loading comb otherwise than across the wagon. Our land here is not as level as that around Medina and Marengo. Mr. W. F. Marks says the most of it lies "up and down," and still I find it safer to carry hives with their combs crosswise. Half-story hives with loose hanging frames I often carry without fastening the frames, which I am sure I could not do with frames running lengthwise. The moving on a sleigh is a different thing. There is no side motion worth noticing, but the jerk endwise is severe; so I always load the hives with frames running lengthwise as we would load on railroad cars. I believe it would be safe to lay down a rule thus:

For moving on sleigh or car, load with the frames running lengthwise. For moving on a wagon, load with frames running crosswise. On a very smooth road it will do no harm to

have combs run lengthwise with the wagon, and I would load as most convenient.

Naples, N. Y.

[And here is something further.—ED.]

In regard to the instructions on your caution-cards, we might say that we have always considered that the part which refers to loading honey on to wagons was wrong. The side bumps on our road to market are, we believe, a thousand to one end bump, and consequently we have always loaded our honey with the edge of the comb pointing toward the wheels. This brings the crates crosswise of the wagon, and also economizes room. How many crates could you get in an ordinary wagon-box if loaded as directed on the cards? Mr. Byron Walker's caution-cards have the instructions right, as we consider it, and he evidently thinks so too.

Dr. Miller says, p. 908, that on *good* roads the side shake is more; and we want to add that it is the same on *bad* roads. We have to travel several miles to market, over the worst broken corduroy road in the country.

Sanilac Center, Mich. W. J. MANLEY.

[This is quite in line with other evidence that we have been having from time to time, especially with the Stray Straw on this subject, page 326. I think we may set it down now as a fact that comb honey should be loaded crosswise in a wagon, and lengthwise on a car. Our printers have had instructions to change our printed labels accordingly.—ED.]

#### INTERVIEW WITH HANS PRETZEL.

BY CHALON FOWLS.

There is that scattereth and increaseth yet more; and there is that withholdeth more than is meet, but it tendeth only to want.—PROV. II : 24.

My next call was on an old German back in the country, whom I will call Hans Pretzel, because that isn't his name. On approaching the house I found my way barred by a big bulldog; but the owner soon appeared, saying,

"Vell, vell, vell; vy don'd you come in, Mr. Fowls? Looks like you vas pashful."

"Well, you see, Hans, your dog looks so big that I feel small. Say—he looks as though he could see clear through me. May be he knows that I came after money."

"Vy, mine goot gracious, Mr. Fowls; I nefer taut as you would pe after my monish. What have you now in your hed?"

"Oh! I want you to subscribe for GLEANINGS, and join the Bee-keepers' Association."

"Nit; my bees do nothing dis year. I haf notting to fool away on dem vellers."

"Yes; but you have got the bees, and ought to keep posted, so you can get a good price when you do get a crop, and we may get a good crop next season."

"Nix; I vill no more fool away good monish in handt for dat good-for-notting bird mit de bush; he vill prob'ly pe un old crow when I get him."

"Why, how do you make that out, Hans?"

"Vell, ven I got someding, den first ting I know I don'd ain'd got it. Ven I taut I got a big brice for my honey, I youst gif it away. Dem shneaks in de city stheal de whole shoot-ing-match. Say—I like now pretty bad, ven I could set my dog Bose on dem velllers."

"You seem to have a good deal of confidence in your big watchdog."

"Yaas, I eats him vell and he keeps me vatch."

"Well, that just illustrates what our association would do for you if you would support it. It would be like your big watchdog, ready to protect you from these commission sharks and other enemies."

"Vell, vell; may pe so; but I don'd like to pay monish for someding I don'd got alretty."

# RAMBLE NO. 186.

## Some New Facts Relative to Alfalfa.

BY RAMBLER.

Perhaps with only two seasons' experience with alfalfa as a honey-factor I should hold my peace. I am, however, inclined to give my experience so far as it goes, and will.

My first crop of honey from alfalfa was secured in Scott Valley, in the extreme northern portion of the State. The first cutting for hay was early in July; the next, late in August. Upon both growths there was a profusion of flowers, and the farmers allowed it to stand several days in bloom, and the bees secured a fair honey crop of excellent quality.

It was stated by the bee-keepers of the val-



A DOLLAR CLOSE BEFORE THE EYES WILL SHUT OUT GOD'S RESPLENDENT SKIES.

"But, Hans, even your big dog would not keep watch for you if you were too stingy to feed him first. The trouble with you is that you have been too much in the dark. A dollar may blind you if held to close to your eye. It is penny wise and pound foolish for a bee-keeper to withhold the dollar that should go to support the best organization for mutual protection that the bee-keepers of this country ever had, and just as foolish to hang on to the dollar that should go to pay for a journal like GLEANINGS."

"Vell, vell; here is my tollar; you send in my name right quick, for I vant to get in mit dem velllers vat vatch out for dem rascals like my big dog."

ley that the yield from this source fluctuated to quite an extent; and there was proof of this the next year when I learned that the yield was very light.

In respect to honey in other localities, we have been led to believe that it never fails to yield from a fair to a good crop of honey. For instance, in Arizona we never hear of total failures, and I think the same conditions exist in Colorado and Utah, and I presume Central California has reported no failures. From my own observations in the latter location I must conclude that alfalfa yields honey sparingly occasionally, in some districts.

The experience of others has been the same, for I know of five bee-keepers who moved

their bees from Southern California, into widely different portions of the central portion, and their success was indifferent. Still, in some portions of Central California a fair yield of honey was secured, and I presume it was attributed to alfalfa.

Let us observe the conditions in the locality under my own observation. The first blossoms the bees work upon with vigor are the almond, in February; after this comes a profusion of fruit-bloom in March, with a few honey-producing wild flowers—*alfileria* the principal one. After the fruit-bloom there is a dearth of honey-producing flora; and if the bees are not well supplied with honey to last them through May, and often through June, a little feeding will be necessary.

"But," you say, "where was the alfalfa bloom in that alfalfa country?"

There is certainly a splendid growth of alfalfa, and the first mowing is in April; but there is no bloom upon it worth mentioning. A good share of the heads are blasted, and there is a fuzzy whiteness where the bloom ought to be. If there should happen to be a few or many blossoms, the bees are not inclined to work upon them. In May the conditions are about the same. While in June alfalfa may and may not secrete nectar, some seasons an extracting can be obtained; the next, perhaps not a pound.

The bees have made a useless spurt of brood-rearing from fruit-bloom away back in March. If they swarm during this bloom, the new swarms will hardly make honey enough to live upon, and the old colonies will use their stores upon useless brood-rearing, finally diminishing the brood-nest. As the honey-season approaches in an uncertain way in June or July, the first few weeks of it are spent in bracing the colonies up for business.

My experience with our out-apiary in the weed-patch during this dearth of nectar was new and very interesting. The colonies were not in very good condition in the spring—weak, and short of honey. On the 25th of May I put down this record: "Average of one ounce of honey to the colony."

Many of these colonies were examined in the morning; and, though there was, on an average, 200 square inches of brood in each hive, I failed, after close scrutiny, to find one cell of honey. Examine the same combs near evening, and a few cells of honey would be found near the brood. They were actually living from hand to mouth, and decreasing instead of increasing the brood-nest. Yellow sweet clover was the source of the honey-supply. The weakest colonies were fed sparingly, and they came up to the July honey-flow in fair condition.

If the bees do not get up to the swarming-point during the fruit-bloom, the starving-period in April and May takes the desire all out of them, and, no matter how freely honey comes in afterward, or how full the hives become, there is no desire to swarm; and, as a bee-keeper remarked, who owns 500 colonies in several apiaries, and cares for all of them himself, "this starvation-period is our salvation from the swarming-fever."

If there is no alfalfa-bloom previous that the bees work upon, there is a profuse bloom in July, August, and September; but even during these months the secretion of alfalfa nectar is sometimes meager.

The failure of the bees to secure alfalfa honey is wholly due to an atmospheric condition, and not because the alfalfa is cut too early. It would be much to the advantage of the bee-keeper if it were allowed to stand a little longer; but in a district where there is a large acreage there is more or less of it in bloom all the time. Each farmer cuts his alfalfa four times during the hay-curing season. Mr. A cuts his this week, Mr. B next week; they are not all ready to cut at the same time, and the whir of the mower is heard almost continuously through the summer. Then there are the alfalfa-pastures where hundreds of cattle are grazing. There is quite an amount of bloom in these fields.

But if alfalfa is almost a failure, sometimes there are other flowers in many localities that come to the rescue.

If there were a small hill handy I would take you to the top of it and direct your attention eastward. Well, let's climb to the roof of the veranda. Off toward Dinuba, five miles away, are hundreds of acres of wheat land. After the wheat is cut, the California compass-plant, or

The sunflower that, with warrior mein,  
Still eyes the orb of glory where he glows,

puts in an appearance, and grows and blooms with utmost luxuriance. The bees work upon it with considerable vigor for both pollen and honey for six weeks in August and September.



BEE WORKING ON BLUE CURLS.

- 1.—Tube straightened by bee, and pollen striking back.
- 2.—Hair-like stamens bearing pollen-grains.
- 3.—Pollen-grains.
- 4.—Buds.
- 5.—Two leaves at end of tube for bee to alight upon.

Another plant with as many names as the locations in which it is found comes into bloom early in August, and continues until frosts

subdue it in October. It is here called camphor-weed, from its rank odor; but its true name is "blue curls." "Wild Flowers of California" says of it, "This species blossoms late in the summer, and grows upon very dry ground, where it seems almost a miracle for any plant to thrive."

It seems to grow upon portions of wheat lands where the sunflower will not, and is in bloom at about the same time. I have met this plant in all portions of the State. In the northern portion of the State the honey from it is dark and of rank flavor, but here in Central California it is of good flavor, with a dis-

exhibit one of the wonderful plans of nature for the proper distribution of pollen grains and the perpetuation of its species.

I noticed one day that the bees were coming in with their backs painted a dirty greenish hue, and the next time I was out upon a tour of observation I found the bees working blue-curl blossoms, and here was one of nature's paint-brushes. The blossom is in shape something like that of white-sage. The bee alights upon the curled-up corolla of the latter, and its weight opens, as it were, a trap-door, giving access to the nectar-tube (see illustration in A B C, page 262, 1900 edition).

But the nectar-tube of blue curls has a sharp bend in it, and above are two long curved stamens, or filaments, with pollen-grains upon the extreme tips. The bee alights upon the edge of the corolla; its weight straightens the nectar-tube, giving it access to the tube. At the same time the two curved filaments drop down and strike the bee on the back of the thorax, and leave their mark. The illustration will give some idea of this language of the flowers:

To him who, in the love of  
nature, holds  
Communion with her visible  
forms,  
She speaks a various language.

The bee and the grape have been under controversy for many years, and apiaries in this State have been burned by grape-growers for the fancied injury to their product; but that happened in the southern end of the State. Here is a vineyard that corners right up to our apiary of 160 colonies. An eighth of a mile away is another vineyard of 35 acres; a little further along, another of 40 acres—vineyards and bees in all this region. The bee-men and the grape-men ought to be at perpetual warfare; but it is quite the contrary. They dwell in harmony.

Through the early portion of the grape season, not a bee disturbs the ripening grapes; and when the large clusters are spread upon the trays for drying, not a bee disturbs the raisins. The only time during the past season when the bees worked upon the grapes was late

in the fall, and upon what is called the second crop. It is too late in the season to cure this crop. Birds, squirrels, and various insects, including bees, work upon it. Not much profit is expected from the late crop. A good share of the vineyardists get a little profit out of this crop by selling the grapes to the wineries. Mr. McCubbin, being a consistent Prohibitionist, will not sell to the winery.



EUCALYPTUS-TREE PLANTED 11 YEARS AGO, NOW 85 FEET HIGH AND 3 FEET IN DIAMETER.

tinctly acid quality, and almost water-white. It is in an extreme hurry to granulate, and will commence this process within three days after extracting. When secured in the comb it soon granulates there.

Although people apply vile names to the plant, and keep as far from the odor as possible, still it is a most interesting plant to visit; and the mechanics of the blue curl's blossom

He thinks the juice of the late crop more useful to birds and insects than as an intoxicant, and upon that point Mr. McCubbin and the Rambler are in accord.

When bees store this juice in the hives, no evil effects follow. It seems to answer all the purposes of honey.

Peachtree Utter should come here and see the harmony between the peach-growers and the bee-men—no disagreements. Apricots, while drying, are badly infested by the bees; but the owner of a large apricot-orchard has a few colonies of bees himself. He is so much civilized that he thinks a few colonies placed in his fruit-orchard of prunes, peaches, and apricots, are more benefit than a damage.

The umbrella-tree, though not numerous, is a honey-producer, and the eucalyptus is in evidence in this portion of California, and it gives a good record as a honey-producer.

To give the reader some idea of the value of this tree as a wood-producer, I present the accompanying photo. This tree was planted eleven years ago by Mr. McCubbin, who, with his two children, Grace and Bruce, are sitting under it. It was about twelve inches in height, and as large as a wheat straw. By actual measurement when the photo was taken, it was 85 feet in height and three feet in diameter. The eucalyptus is planted here mostly for shade around the house, or in avenues along the highway.

There are but few plantations of it for wood. If the acreage of it were increased for this purpose it would have a happy effect upon the bee-keepers.



#### INCREASE AND ITS PREVENTION.

"Good morning, Mr. Doolittle. I came over to have a little talk with you on the swarming question, as some of my bees are becoming crowded so they hang out on the outside of the hives."

"Well, Mr. Brown, swarming is a large subject, and one very many bee-keepers have studied over; but up to the present time no one has fully stopped all swarming when working for comb honey. But I do not wish to stop all swarming, for I believe that swarms which issue previous to ten days before the honey harvest are a good investment; and to try to prevent such swarms as are disposed to issue at that time, or earlier, has proven nothing but vexatious with me, the result being a loss in honey—or, at least, I think so, and so I let all first swarms which come ten days or more before the main honey harvest commences be hived in a new hive."

"Very well. And how do you manage these swarms?"

"As soon as the hive is half to two-thirds full of comb I put on the sections; or where I furnish the new hive with empty combs, or

fill the frames with comb foundation, I put on the sections at once."

"I see you are pretty well posted in managing prime swarms; but what about after-swarms?"

"I have very little trouble with these, as I generally set the new hive with the swarm on the stand the parent colony occupied, placing the old hive on a new stand where I wish a colony to be. This draws the most of the field-bees in with the swarm so that the parent colony has little desire to swarm when the first young queen hatches, therefore allow her to destroy the other queen-cells."

"But can you depend on this always?"

"No, not always; and for this reason I look over the combs in the moved hives nine days after moving; and if the bees have destroyed the cells, and no piping is heard, I am sure *that* colony will not swarm. If I hear piping, or find the cells not torn down, then I destroy all but one myself, saving the best-looking one, unless I find a cell from which the queen has emerged, which I always do where piping is heard, in which case I destroy all. But what I wish to know is, what I shall do with such colonies as have not swarmed within five or ten days of the honey harvest. To allow them to swarm at the very commencement of the harvest spoils the old colony from doing any thing in sections."

"Well, so far you have been instructing me, and now I will try to see if I can help *you*. My plan to prevent swarming at the commencement of the honey-flow has been to stop them by way of a moderate increase, by the following plan: Shake all the bees and queen from a populous colony into an empty hive—that is, a hive having frames filled with foundation, and a super on containing sections filled with thin foundation, for this shaken colony will contain a half more bees than would a swarm from the same hive. The combs taken, freed from bees, but full of brood, are arranged back in the old hive, when I move another colony to a new stand and place this hive having the combs of brood in its place, giving them a laying queen. This last colony moved may be the weaker of those which have not swarmed, as any colony strong enough to think of swarming at all will furnish field-bees enough to care for the brood, providing the change is made at a time when the bees are flying freely. You will see that I make one new colony from two old ones, having all in the best possible condition to store comb honey by the time the harvest arrives."

"Yes, I think I understand the plan, and I will try it. But suppose that I have all the increase I desire from the swarms which issue previous to ten days before the honey harvest. Is there no way of stopping the rest from swarming, and still have them work to advantage in sections?"

"Do you clip the wings of your queens?"

"Yes, always."

"All right. Now, if we have decided that prevention of increase will be more profitable than further increase, when a swarm issues catch the queen as she is found running around in front of the hive, and place her in a wire-

cloth cage, kept on hand for this purpose; spread the combs a little in the center of the hive, and then by means of a wire attached to the cage suspend it in the center of the hive, and the bees will soon return. The first queen-cell will be due to hatch in seven days; but if we wait the seven days and cut off the queen-cells at that time the bees will have brood still young enough so they will start cells over the larvæ, and often cherish these cells, raising a queen from them and killing the old queen when liberated, thus destroying the usefulness of the colony, as a queen reared from such brood is practically worthless. So to overcome this difficulty I open the hive in four days and cut off all the queen-cells which are sealed, allowing the rest to remain, which satisfies the bees so they do not build any over brood. I now wait six more days, or ten days from the time the swarm issued, when all queen-cells are cut off and the queen liberated. The bees will now go to work in the sections, with a will that is almost surprising; and the honey that has been stored in the combs while the queen has been caged, together with that coming from the fields, makes an aggregate which booms work in the sections to the greatest degree."

"But suppose that I do not wish swarms to issue; what then? Can not the queen be caged without waiting for the swarm to issue?"

"Yes, I often hunt them up and cage them, putting the cage near the entrance in one of the frames, allowing it to rest on the bottom-bar to one of the frames not having the comb built fully down near one end. Where you cage in this way it is necessary to cut the queen-cells but once, unless you find some nearly ready to seal, for none will hatch from those built over brood before the eleventh to thirteenth day. Therefore, if we cut the cells on the tenth day and liberate the queen we are all right. But where a swarm has not issued, the bees will not always be satisfied without trying to swarm, if the queen is released in ten days' time, so on cutting the cells at this time I put a plug filled with queen candy in the cage, which is long enough to take the bees three or four days to eat out the candy to get to her, thus liberating her."

"This candy is put in a hole bored through the center of the plug?"

"Yes."

"How long a plug does it take for three days?"

"If the hole is only  $\frac{3}{8}$  inch, 3 inches long is about right, as they eat out about an inch a day. But I hear a horn blowing up at your house. What does it mean?"

"It means my bees are swarming, and I'm off."



#### A MANIA FOR SUPERSADING QUEENS FOR THE WHOLE APIARY.

Honey is coming in at a good rate, and the bees are casting a few swarms. We are met with a condition that is causing us considerable trouble, for the reason we are not able to strike on any plan to prevent it. The condition is, the bees are possessed with a mania for superseding their queens. Queens of last season's rearing have been superseded while keeping from four to six frames filled with eggs and brood in all stages. Often they will build queen-cells, and just a few days before hatching will tear the whole lot down, thus rendering themselves hopelessly queenless. At other times they will permit a queen to come out, become fertilized, and kill her before she begins laying; and, again, they will permit the queen to lay a few days, then start cells while the queen is yet laying; and about the time the cells are ready to seal, the queen is missing from the hive. The trouble is not with a colony or two in a large apiary, but we are finding about thirty such in one apiary of 250 colonies, and a neighboring bee-keeper reports over 60 in an apiary of 200 colonies. I noticed a little trouble of the same nature last season, but attached little or no importance to it; but this year we hear of several apiaries with the same trouble. We should like the opinion of bee-keepers as to what causes the trouble, for trouble it certainly is.

M. W. SHEPHERD.

Marchant, Fla., Mar. 26.

[The condition you describe is somewhat remarkable. I have known of colonies that persisted in superseding queens, but I never knew the mania to extend to any considerable number. It would almost seem as if there were some disease or trouble that the bees had knowledge of, which you as their owner could not discover. We lay it down as a rule that supersedure does not take place unless the queen is defective or is getting old. I should, therefore, be inclined to believe that there is some disease that attacks the queens, but which for the time being does not apparently cut down the egg-laying to the observer. If some one else is in position to give information on this question we shall be glad to hear from him.—ED.]

#### GOOSE WING FOR BRUSHING BEES.

If you have never tried a quill out of a goose's wing to brush bees off the comb, try one. I use them and think they are nice. When it gets sticky, throw it away and catch a goose and pull some more. One at a time is enough for a brush.

IRVING PIERCE.

Union City, Mich.

[I have used turkey feathers and chicken feathers, but I do not remember distinctly that I ever tried the big feather of a goose;

THE lawn-mower is now needed in the apiary to keep down grass. If the apiary is forced in, try a few lambs or even sheep. It is not safe to turn larger stock into the beeyard. But it will not do to use sheep if there are grapevines for shade, for the sheep will eat the vines as well as all other vegetation.

but I know that such devices for brushing bees off the combs are very generally used by bee-keepers, especially if they are located on a farm where feathers are plentiful.—ED.]



BEE-KEEPERS who expect to attend the convention of the National Bee-keepers' Association at Buffalo next September are requested to prepare questions and hand them in. The committee, however, would be glad to have these questions sent by mail in advance, so that all duplicates may be stricken out. Send questions to Sec. A. B. Mason, Station B, Toledo, Ohio.

ROBBING is dreaded by the beginner more than by the veteran, generally. If the colony being robbed is weak, and has little honey, it might as well be left to its fate. If it has much honey it will be best to remove the bulk of it to safer quarters. If the attacked colony is worth saving it might be best to take it to the cellar for a few days till things have become quiet and the robbers have taken to a more legitimate business.

THE W. T. Falconer Co. and The A. I. Root Co. will have exhibits at the Pan-American exposition, in the Agricultural Building. These exhibits will be conspicuously placed in the gallery, this gallery being reached by means of a traveling sidewalk. The two exhibits are placed together in the same booth, as it were, facing each other. Huber Root, youngest son of A. I. Root, will be in attendance on our exhibit a good portion of the time, to explain the goods and answer questions. He is at present attending school at Oberlin, O.; and when he returns, after a little "coaching" in Medina he will probably be able to receive bee-keepers at the Root Co.'s exhibit at the Pan-American.

#### AN IMPORTANT DECISION FOR OHIO; HONEY-BEES NOT A NUISANCE.

THE following letter contains a piece of news that will be read with much pleasure, not only by the bee-keepers in Ohio, but by those in every State where this question comes up, or is liable to come up, as to whether bees are a nuisance or not. Here it is:

*Mr. Root.*—C. W. Carr, of this county, was indicted for maintaining a public nuisance, in that he kept and maintained a place for the raising of honey-bees. We defended Mr. Carr, and know that you will be interested in the outcome, as we have talked with beemen considerably, and read your article on the Utter trial.

We have just argued a demurrer to the court, and the court held that it was not a public nuisance to keep and maintain honey-bees in this State.

It was the same old story of jealousy and malice. Mr. Carr is a young man, and the head of a family consisting of his widowed mother and young brothers and sisters. His health is such that he is unable to work at hard labor, and he has managed to keep

the family together by raising chickens, keeping bees, and a small garden-patch. His neighbors, unfortunately, were men whose business was in the use of a jack-knife upon dry-goods boxes, and grumbling. Wauseon, O., May 10. HAM, HAM & HAM.

This is a case that had not, if I am correct, been referred to the N. B. K. A. If so, I had no knowledge of it. At all events, a victory has been won. Mr. Carr has been vindicated, and the bees declared to be not a nuisance. This decision, coming as it does, will have important and far-reaching results; and I have no doubt that General Manager Secor will secure a copy of the decision so that it can be used in other cases that may come up in this or other States. The attorneys who defended the case so successfully deserve the thanks of all bee-keepers.

#### SNAP SHOTS ON THE FLY.

*Pullman car, en route to New Orleans.*

I have just come from a delightful visit with J. M. Jenkins, at Wetumpka, Ala. Yesterday, May 21, he met me at Montgomery, and then behind his little pony we drove 14 miles across the country through the pines and over the cotton-plantations to Wetumpka.

For the first time in my life I saw the cotton-fields being plowed and cultivated by the black man and his family in the good old-fashioned way. Regarding the colored race, I plied friend Jenkins with a thousand and one questions; but of these and the replies I shall perhaps have more to say later.

We stopped at one of Jenkins' out-yards, took some pictures, and drove on. Later in the day we "changed horses," this time taking one of Jenkins' mules, and started for the out yard among the pines. On the way the aforesaid mule entertained us (or me, rather) with several characteristic solos. Say—he could beat all the mules I ever heard in running up and down the scale. Such beautiful zigzag trills I never heard before. You just ought to have seen the black faces pop out of the cabin doors. You see they (the owners of the faces) knew it was Jenkins' mule, for they know Jenkins and his mule all over that country. Well, on arriving at the yard I took some more views and some more notes, and then we started back.

Strawberries, blackberries, and dewberries were in full bearing, although the season was a month late. In Mr. Jenkins' orchard were several peach-trees that would have some ripe peaches within a week, and—

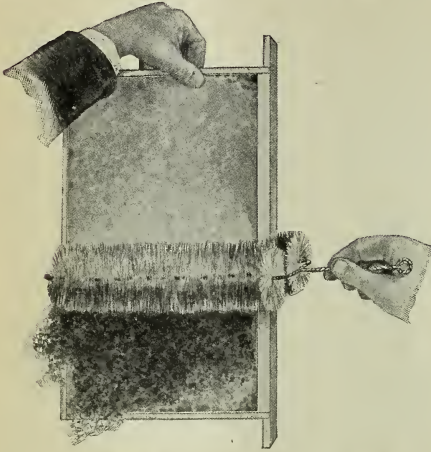
Say—this train joggles my elbow so that I shall have to give up writing for now; but as soon as I get my pictures developed and engraved I'll have more to say about the visit to Mr. Jenkins.

*Later.*—I'm taking some snap shots with my little pocket camera. We are crossing bridge after bridge, and such beautiful scenery! I wish you could see what I see as the kaleidoscope changes.

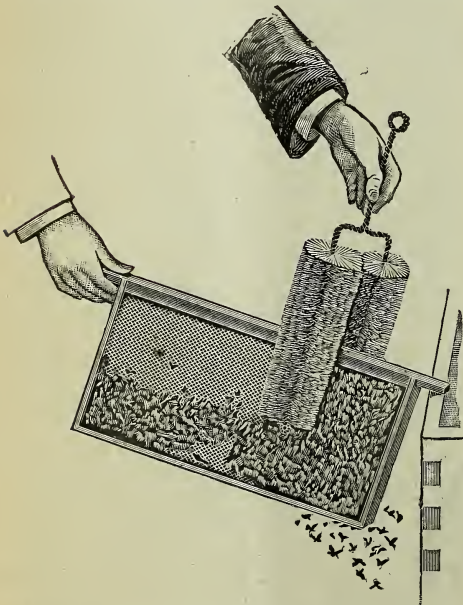
#### A NEW BEE-BRUSH.

MR. JOHN HAMMOND, of Buena Vista, O., a manufacturer of brushes of all kinds, and also a bee-keeper, has sent us a sample of his

double brush for brushing bees off the combs. It is very unique in principle; and in practice, from the limited number of tests we have been able to give it this spring, it is all it seems to be in theory. Both sides of the



comb are cleaned with one or two sweeps. In the average extracting apiary a large number of bees can be driven off the combs by the right use of smoke. Some little time ago I described how, by the use of a quilt or cloth laid over the top of the frames, one could



cause the smoke to be sucked down into the brood-nest by an alternate succession of flops of the quilt, producing a suction, such suction causing the smoke to go down into the extracting-combs, driving the bees before it into the brood-nest. In the Cogshall apiaries I

have seen combs so treated taken out of populous colonies, almost free of bees. Well, suppose there were quite a number on each side. Just imagine how quickly one could disengage every bee with a double brush like the one shown in the illustration.

We have been so well pleased with these brushes we have decided to catalog them next year, and in the mean time we will furnish them to those who desire them, at the prices mentioned elsewhere under the head of Special Notices.

#### IS THE TRADE IN LONG TONGUED BEES ALL RIGHT?

In *The American Bee Journal* for May 9 appears an article written by G. M. Doolittle, with the heading, "Long-tongued Bees—Fad or Fallacy, Which?" which is somewhat of a surprise. Mr. Doolittle says he feels it his duty to call a halt, "that too much money need not be sunk on this latest fad, even if we do not call it a fallacy." There is some danger that too much may be expected, and that disappointment may result, hence the propriety of some words of warning, or, as Mr. Doolittle expresses it, of calling a halt; but Mr. Doolittle is in error when he says "no one has seen fit to do this," for such words of warning in very distinct terms have more than once been given in these columns.

Mr. Doolittle speaks of the search for long tongues as a fad upon which money has been wasted, and he wants to ask about it "before more money is wasted on the fad." The attempt to secure in some way the crop of red-clover honey is no new thing. For many years there has been a longing to secure it, either through a change in the bees or in the clover. E. E. Hasty and others have made commendable efforts to obtain a strain of red clover with short tubes. At different times red-clover strains of hive bees have had much said in their favor, and earnest effort has been made, especially by bee-keepers of Mr. Doolittle's own State, to induce government to introduce *Apis dorsata* for the sake of its longer tongue. Petitions to this effect were printed and circulated. Why did not Mr. Doolittle call a halt while this expenditure of time and money was going on, instead of waiting till the object of search was believed by many to be just within reach?

Mr. Doolittle objects to the claim for superiority of long-tongued bees in New Mexico and elsewhere where there is no red clover. If such superiority has been observed, why not report it? Whether it be that other good qualities are found closely connected with long tongues, or whether it be that there may be other plants from which the nectar can be obtained only by tongues of unusual length, if the fact remains that, in more than one instance in regions without red clover, when a colony was found to have distinguished itself in the matter of honey-gathering, measurement has shown tongues of unusual length, is there any impropriety in making such fact known?

The chief charge seems to be that, when any thing has been said in favor of long

tongues, it has not been accompanied by the statement that long tongues were of value only in red-clover regions. Was there any necessity for such accompanying statement? Has it not been so generally understood that it did not need mention? If, however, it turns out that the value of long tongues is not restricted to red-clover regions (and testimony to that fact is not wanting), then still less is it necessary.

Numerous quotations in favor of long tongues are given, and then Mr. Doolittle says:

"And so I might go on, giving quotation after quotation of statements made along this line, without any special qualification, or, if any qualifications have been made, they have been so hidden under a lot of rubbish, or so twisted that the reader is led to believe that long-tongued bees are just the thing he should have if he would succeed, no matter about red clover, or in what portion of the country he resides.

"Now, as I hinted in the start, long-tongued bees *do* have an advantage outside of the red-clover districts, or they *do not*; and to give misleading statements, or those actually false, is something that our bee-papers of the present day should not stoop to doing, not even when the motive of gain prompts its advertisers."

As all the quotations immediately preceding these two paragraphs are from GLEANINGS, there is no blinking the fact that GLEANINGS is the paper meant. It is true the words "bee-papers" are used; but it seems evident that Mr. Doolittle had only one paper in mind, for, immediately following, in the same sentence, he speaks of "*its* advertisers."

The direct charge of hiding under a lot of rubbish and twisting the truth, and the scarcely veiled charge of giving misleading statements, or those actually false, is a somewhat serious one, and GLEANINGS promptly enters a plea of not guilty, and asks Mr. Doolittle to be specific and give an instance of either of the things charged, in which case prompt retraction and apology will be forthcoming. The quotations given do not substantiate the charges. The rubbish under which the truth is hidden is not shown; nor the twist given to it; and the statements quoted are not such as to mislead.

There seems a degree of inconsistency in making the charge that the attempt has been made to cover up the fact that red-clover regions only could benefit by long tongues, when immediately preceding the charge Mr. Doolittle makes a quotation from GLEANINGS which, if correctly attributed to the editor, would distinctly disprove the charge, capitalizing and italicizing it as follows: "The movement for longer tongues is simply to get the red-clover crop of the North, which now is practically all wasted. The bees, NO ONE CLAIMS, *would be any better except on that account.*"

Mr. Doolittle is hardly justified in making that quotation in such a way as to give the impression that the editor holds the opinion expressed in the quotation. Many times a view of a correspondent is not held by the editor. Neither does the editor necessarily hold the views given by one who conducts a special department in GLEANINGS. This is frequently seen in Dr. Miller's department of Straws, and might happen in Mr. Doolittle's department, or in that of Stenog, from whom the quotation was made.

It is not very strange that Stenog should so express himself, for it is probably true that the majority of bee-keepers, especially until lately, have had in mind red clover when speaking of long tongues. But the editor by no means holds it as proven that red clover is the only honey-plant with flower-tubes so deep that bees with ordinary tongues can not reach to the bottom. All the same, the inconsistency is, none the less, to be charged with hiding a thing while at the same time holding it up to view.

It is mentioned as not just the right thing that advertisers from Florida and Texas commend their bees with long tongues. Suppose their *is* no red clover in Florida and Texas; does not Mr. Doolittle know that such advertisers expect to find customers in the North, where there is red clover? In any case, if an article is offered for what it honestly is, is there any thing wrong in that? Is a man to be considered a cheat unless every long-tongued bee he offers has a tag attached, reading, "Good in red-clover regions only"?

GLEANINGS has tried, and will continue to try, to give the whole truth about bees with long tongues. If measurements show that a large number of the best bees have long tongues in regions where red clover is not grown, then there will be ground for believing that there may be some advantage outside of red-clover regions, in having bees of that sort, whatever the explanation for their superiority may be. Bee-keepers are an intelligent lot, each one capable of judging for himself whether bees with a certain characteristic will be an advantage in any given case. Nor will they relish as a compliment being told that they do not know enough to judge for themselves whether they want long tongues or not.

It might be in order to ask why, if it is Mr. Doolittle's duty to call a halt on the long-tongued fad, it was not an equal duty to say something about the fad for five bands. In that there could be no gain in the honey-crop—the only money gain being to those who had queens to sell; while it is a certainty that a sufficient length of tongue will bring an increase of honey wherever there are flower-tubes of honey-plants just beyond the reach of tongues of ordinary length. Did Mr. Doolittle ever call a halt with regard to the chase after color? Did he not, indeed, promote it? and does he not claim to be one of the chief agencies, if not the chief agency, in establishing the five-banded bees? If it was right to have a prominent part in a fad that could bring money into the pockets of only a small number engaged in queen-rearing, it hardly seems necessary to be so intensely severe upon a fad which seeks to put money into the pockets of many times that number through extra gains in crops of honey.

#### OUR METHOD OF MEASURING ILLUSTRATED; SOME INTERESTING OBSERVATIONS.

IN spite of all I have said on this subject, there are still a good many who do not seem to understand our method of measuring. At several of our bee-conventions last winter I

threw on the screen a picture of our Mr. Wardell, who has charge of our apiary, in the act of measuring a bee's tongue, and I now show the same thing in half-tone. A queen-cage is shown near the left hand. Between the two hands is a steel rule having hundredths of an inch graduated off on one side. In the left is a pair of tweezers, and in the right a knife-blade. In front of the right hand is a bottle of chloroform and a handkerchief. Mounted on a standard, standing directly over the rule, is a magnifying-glass.

The cage of bees is chloroformed by putting the spot in the handkerchief, dampened with a few drops of the anesthetic, over the wire cloth. In a minute, more or less, the bees will be "laid out," but still quivering with evidences of life. In this condition the wire cloth is pried back. With the tweezers the

as fruit-bloom is beginning, they show  $\frac{20}{100}$ . It would appear that the tongues of the bees, in order to show their greatest length, must be developed by *straining* to reach the depth of certain flower-tubes. Use has a tendency to develop any organ among the *vertebrata*, and why should it not in the case of the *insecta*?

And, again, it seems possible and probable that bees that have been sent through the mails will not show as long a tongue-reach as before they started.

We shall shortly conduct some experiments that will either prove or disprove some of these propositions.

In the mean time let us not jump to the conclusion that long tongues inevitably mean large crops of honey. We must not forget that long tongues constitute only one factor.



MR. WARDELL, MEASURING A BEE'S TONGUE.

operator takes out one bee, and holds it while the head is removed with the knife-blade. The head is then laid on the steel rule, directly over the hundredths marks, *face upward*. A needle combs out the tongue, which the chloroform has caused to be extended, and lays it carefully in a straight line. The operator then counts off the hundredths with the glass, beginning from the end of the tongue and ending at that point at the end of the mandibles.

A good deal of evidence has come in of late, going to show that the length of tongues of any particular colony of bees varies according to the season, and also according to the age of the bees themselves. Early in the spring, mature bees will show from  $\frac{17}{100}$  to  $\frac{18}{100}$  shorter tongue-reach than they will later in the season. Bees that last year showed a reach of  $\frac{21}{100}$  during the height of the honey-flow, early this spring showed only  $\frac{17}{100}$  and  $\frac{18}{100}$ . Now, just

A tall man has the advantage of seeing over his fellows, and of being able, perhaps, to take longer steps, but he may not be able to "get there" as soon as his shorter brother.

#### STRONG COLONIES ONLY ARE PROFITABLE AS HONEY-GATHERERS.

THE buckwheaters do not need to have their colonies in working order till the month of August, and there is no use in having them overflowing with bees in June. Colonies just arriving at their maximum strength at the beginning of the honey-flow will accomplish much more than other colonies having reached that state a month or two sooner. The buckwheaters would do better to divide the strong colonies in the early part of the season. With doubled stock, and all just coming into their prime, the honey crop can be doubled.



Thou shalt love thy neighbor as thyself.—MARK 12:31.

These are the things that ye shall do: Speak ye every man the truth to his neighbor; execute the judgment of truth and peace in your gates; and let none of you imagine evil in your hearts against his neighbor; and love no false oath; for all these are things that I hate, saith the Lord.—ZECH. 8:16, 17.

You will notice from my texts that I am to talk about "neighbors" this time, rather than "our homes;" and the matter has come up especially as I am starting a new home—that is, a new summer home—among new people. You have probably all heard the story of the hotel-keeper. I think he must have been a Yankee as well as a philosopher, for he was much in the habit of getting acquainted with all his guests. Well, a man came along with his teams and family to stop with him over night. He was moving to a new locality. He gave, as a reason, that he had always been unfortunately located among the meanest set of neighbors to be found on the face of the earth, and therefore he was going to try to find a better place. Our philosophical host informed the man, however, that he would find exactly the same kind of neighbors around his new home that he had left behind. There was no difference. Next day another mover came along, who explained in his talk that certain circumstances made it advisable for him to leave his old home, but he greatly regretted being obliged to leave, because his neighbors had always been so exceedingly *kind, fair, and friendly*. He said it almost broke his heart to think about breaking the ties that bound him to each and all. Well, our wise friend replied to this man much as he did to the other, saying something like this: "My good friend, I am happy to tell you that you will find just as good neighbors where you are going as you have left behind. You need not feel troubled nor worried."

What a wonderful truth this story illustrates—that is, if it indeed be true, and I rather suspect it is! Can it be true that it is not so much what the people are as what we make them? or, in other words, the state of your own heart has more to do with the neighborhood than any thing else. I suspect this hotel-keeper must have been a Christian, although the story did not say so. He had discovered the real *philosopher's stone*, the source of joy and peace and happiness in this world of ours.

I thought of this little story when I managed to secure a dozen days of absence from business during the busy fore part of May. In fact, I set foot in Leelanaw Co., Mich., on the first day of May, and I remained there eight days, Sunday included. I thought of the neighbors, especially as I wanted to go around among them and employ men with their teams to help me during my brief stay, and start a very humble home out in the woods. Yes, I knelt and prayed for these

neighbors, even before I had seen them. I do not think they will feel hurt if I call them by name; for, although I am going to give you a picture of a special locality, I have prayed that God shall give me grace and wisdom not to find too much fault, even if I touch upon the weaknesses and frailties of average humanity.

The first day we had only two men and a team, not counting myself. We made quite a clearing by hauling away the logs that cumbered the ground three or four deep in some places. The timber had been previously cut down, and was mostly in lengths so that a team could move it. The next day we were to grub, get out stumps, and plow. I had made arrangements to have several good men, some boys, and a team. A man living very near me had promised a team, or at least I supposed he had. He said if he could not arrange to go himself with his team and plow he would get his brother-in-law, and that I could depend on having one or the other—at least so I understood it. But when I was on the ground in the morning, I waited and waited for the men, boys, and team to show up. For a good while (so it seemed to me) nobody was visible. Finally the man who lived furthest away came with his ax. After waiting till the forenoon was pretty well spent I put off on foot to hunt up my helpers. I found the man with the team, who had promised so fairly, plowing his own field. I asked him why he was not on hand as he agreed. But he did not remember that he had made any positive promise. He said he was working for Mr. Oberlin, and must get in the oats. When I asked about his brother-in-law he said the boat had come in at the dock, and they all had to load it up. I remonstrated, and explained the circumstances. I offered to pay him extra if he would drop his work there and come and help me. But he said he could not do that at any price. He was at work for Mr. Oberlin, and Mr. O. was a very particular man.

"But, friend Burdo, I saw Mr. Oberlin last evening, and arranged to have the lumber delivered at my place, and he said they would furnish me any thing I wanted. He said that was their business, and he was glad to help me locate in the neighborhood. Now, Mr. B. I will stand *between* you and Mr. Oberlin. I know by the talk I had with him he will not charge you very heavy damages for stopping and helping me for half a day."

But I could not move him. He reasoned like this:

"Mr. Root, suppose I should hire out to work for you, and somebody else should come along, and I should go off and work for him. No, I can not work for you this afternoon, not if you were to give me \$25, unless you first see Mr. Oberlin and get permission for me to stop putting in oats."

Now, this is good square common sense; but why did not my "neighbor" apply the same common sense to our talk the evening before? I expostulated, on the ground that Mr. Oberlin was three miles away, and no telephone wire. I told him I could get permis-

sion in a minute, but I should have to take a three-mile wheelride and back again before we could get to work. As there was no help for it I started to make the trip. Then he told me to go down to the dock and see his brother-in-law, Mr. Weisler. Mr. W. said he could not possibly come before afternoon, but he would come then, sure, and bring a stoneboat, plow, and harrow. Mr. W. further told me that Mr. Henshaw, the foreman of the dock, was invested with full authority to manage Mr. Oberlin's men and teams. Said he:

"You go to Mr. Henshaw and tell him how you are fixed, and Mr. H. will take the responsibility of directing Mr. Burdo to stop on the oats from now till noon."

You see I was to have Mr. Weisler's team after dinner. Mr. Henshaw very courteously declared it would be all right for Mr. Burdo to stop the rest of the forenoon, and he did so. On my way back to the ranch I thought of my boys. Pretty soon I heard some boys in the thicket; and there I found Orville, who had promised to help me the afternoon before, but he did not show up. The mother also promised he should come. But she said, when I asked her why he did not come, that they had to have him help load the boat.

Orville and his companions were making whistles out of basswood sprouts. The basswood was just leaving out. Now, I am always glad to see boys make whistles, providing they can make them with a clear conscience; but Orville had hired out to me, as I understood it, and his mother said he was down helping them load the boat. Perhaps I had better explain here that, when a vessel comes into the dock, it must be loaded, whether or no; and for this work the men and boys get much higher prices than they get for ordinary farm-work, so every thing else has to stand aside.

"Why, Orville, your mother said you were down helping load the boat, even though you had promised fair and faithfully to work for me; and here you are, sitting in the shade, making whistles."

He hung his head down, but ventured as an excuse that they found out they did not need him at the dock.

"But why in the world did you not hustle up at once to meet your appointment to work for me? You know you promised to be there yesterday afternoon."

"But, Mr. Root, I did not know that I promised to work for you to-day."

To tell the truth, he had not exactly promised to work for me any longer than that afternoon. But I told him I wanted him badly right along, and I expected, of course, he would help me right along. This was only a sort of boy's philosophy. I have learned by experience with boys that they have sometimes queer ideas of things; and it is not best to expect too much of them, either physically or in the way of keeping promises. Let me say right here that Orville helped me right along after that, and proved to be an excellent boy in almost every respect. He and I are the best of friends, and I hope we shall be as long as we live. Mr. Burdo came with his big team, and did a tremendous lot of stump-pull-

ing, plowing, and removing big stones for the rest of the forenoon, about 3½ hours.

After dinner my men were on hand, but no team showed up. Mr. Weisler's boy was soon there. He said his father was surely coming, for he saw him start off with his team; but when the afternoon was a good part gone I sent Charley to see what the matter was. He said the wind changed, and the vessel could not get under sail without assistance from all the men and teams in the neighborhood. I did not learn how they use teams to move a vessel out in the water; but that is the way I understood it. We had to get along the best we could, and I managed to keep my men busy, though not in a profitable way, without any teams.

Mr. W. promised to be on hand early next morning. Sure enough, he did come; but instead of having a plow and stoneboat he had nothing but a harrow. He explained that the stoneboat was a mile away from home, and he had not had time to go for it. The plow was all broken to pieces, and therefore he could not bring one.

Now, I had made up my mind to make friends with the people all round about my home, no matter what it cost. I was going to have their good will and co-operation; and I knew by past experience that finding fault and blowing a man up would not help—well, let us say it does not help one to sleep well nights, and get along nicely with those who live around him. Some of you will understand me if I tell you that I not only prayed for all these people, but I prayed that God would give me grace and wisdom and understanding to help me build something of a thousand times more importance than the garden and the little home out there in the wilderness. When I saw my friend and neighbor come up with nothing but a "drag" in place of the plow and stoneboat, I prayed the great Father above to help me get along profitably with just the drag.

I think I will not tell you of any more of my disappointments and troubles in consequence of broken promises. When I found I could not have the plow I set the big team to moving rocks without a stoneboat, getting out stumps, snags, etc. I had the big rocks located for the foundation of my building, and then I remembered three hewn timbers, forty feet long, that somebody had cut out and left in my woods. You see, while I was far away, and paid no attention to my property, my neighbors sort o' helped themselves to my timber. My conscience did not trouble me for appropriating these forty-foot sticks. I cut each in two in the middle, and then placed them on top of the big rocks we had placed for the foundation, nailed some boards across them, and there was the foundation of our new home—a good solid one too.

We used the team and drag all that afternoon to very good advantage; and after overcoming all my perplexities one by one I began to get very happy. I worked very hard—perhaps as hard as I ever worked in my life; but I rarely if ever have passed a happier eight days, and I was happy when Sunday came.

The boy who was helping Orville make bass-wood whistles came along with us. We called him Earl. Pretty soon another friend of the two boys, named Thomas, came and proffered his services. Well, when I could not secure any men or teams to help me work I had just these three boys—sometimes four of them; and I tell you we did a lot of work. I know there is an old saying that "one boy is a boy; two boys are half a boy, and three boys are none at all." I had some experience with this trouble. So many boys together would have fun and play more or less in spite of anything I could do. If a chicken-hawk soared over-head, they had to stop and look at it. If Earl's puppy got a woodchuck in a hole it was boylike to want to see the fun. Sometimes I became discouraged; but when I did so I prayed, and then the boys all of a sudden did a man's work for quite a little spell. Toward noon they would get pretty tired; and when I stopped to take my nap on my big blanket on a pile of leaves I suppose they took things pretty easy, and I don't care if they did. May God bless and guide those four boys.

One afternoon when they were pretty tired, and did not seem to feel like working at any thing much longer, I told them I had got to go to Bingham on my wheel to order lumber for the building. I suggested to them that there was not a very good wheel-path through the thicket in the corner belonging to Orville's mother. I asked them if they would not cut away the briars, and fix it so we could get through easier, back and forth. Then I went to Bingham. When I got back it was about dusk, and I was surprised to find something like half a day's work done in fixing up a very nice little roadway through that troublesome thicket.

"Why, Orville, you boys did a tremendous lot of work after I left. You must have worked after quitting time, didn't you?"

Then his mother suggested that they did not get around till after 7 o'clock. Now, you see boys sometimes give us pleasant surprises, especially when they take a *notion* to a job; yes, and after they are apparently tired out with a hard day's work they will jump and run as if they had not done any work at all. Oh how I do love nice clean pure-minded boys! Even if they do vex and try us at times, God knows we can well afford to overlook a great deal.

Right in this line let me give you one more experience. I had been delayed and disappointed so much in getting the ground ready for those peach-trees that I had about given up thinking they would amount to any thing. Finally, one day after we had got the ground all slicked up in pretty good shape, and I was just about ready to think of sending for trees, friend Hilbert drove up with his ponies and spring wagon, with all my stuff. Sure enough, some of the peach-trees were budded, and almost in bloom. I told the boys how anxious I was to get the trees out, even if it did rain, and we kept right at it except when it rained the hardest, and got them out in good order. Of course, we stayed in the building when it rained the most.

About five o'clock one of the boys said he had to go home early that night. As it was his last day with us, I paid him off. When he objected to receiving full pay for the rainy day, I told them they had shown their good will by working out in the wet, and so I did not take out any thing for the time it rained. At this all the rest of them set up a "hooray." Then one of them volunteered, "Mr. Root, is there any thing else you would like to have us do before we quit? If you are going to pay us wages for the time we sat still when it rained, we will try to make you out a better day's work."

Well, I had almost given up clearing up my ravine. I wanted it done badly, for I thought it was about the best ground I had on the place. The raspberry-bushes down in that dark place last fall were toward ten feet high, and there were luscious berries on them almost up into November. I knew the ground was very rich, and I wanted to use it for some of my choice varieties of fruits and vegetables. I told the boys I should be very glad to have that ravine cleared out of rubbish, and every thing that would be in the way of working on it, the next day. They went at it with another hooray, and an hour later I could hardly believe it possible that those boys alone could have done so much work. Most of the stuff had to be pulled down hill; and they would all together get hold of some tree or log, and down it would go on the fly. I had brought with me a Daisy wheelbarrow, and the most approved spades, shovels, hoes, mattocks, etc., that could be found in the market; and the boys seemed to take to those nice new tools almost as ducks take to water. In just a few days they became very expert with them.

I had almost forgotten to tell you about building the house. The boys and I fixed the foundation and laid the floors, as I have told you. I engaged two carpenters, but they could come only one day. I could not possibly manage to get them any longer. I had, however, four boys to wait on them, and a very good man who is handy with tools, even if he is not a carpenter. By noon we had the walls up, and a little after noon we were ready to begin shingling. I asked the carpenters if they could not each take a boy, one on each side, and keep watch so that they would lay the shingles and make a tight roof. The four boys were all ambitious to help in shingling; and you ought to have seen that roof go on. Of course, the boys were expected to wait on the carpenters; but once when he thought I was not looking I saw the boss carpenter carrying shingles from the ground up to the roof, and he put up quite a lot of them too. He said he would rather do it himself than to urge the boys to get more. The roof was on, the door was made and hung, even to the lock and key; and all the windows would have been in, but the teamster who was to bring them over from the store at Bingham forgot to put them on top of his load of lumber. I wonder if this fashion of forgetting things, that throws expensive men out of a job, and costs people sums of money untold, is preva-

lent *all over* the world. My dear friend, in the neighborhood around your home is it customary to have a builder, or, say, a crowd of men stopped in their job because some carrier "forgot" to load on all his stuff? There, there! if I do not look out I fear I shall be finding fault again.

In our hurry to get the logs out of the way, we piled them up just back of the house. I did not set fire to them—first, because they were too damp to burn well; and, secondly, if the wind were to change I knew it would greatly annoy us in our work. As soon as we got the shingles on, several of the older men began shaking their heads, and looking at that log-pile almost as high as the house. They said if a fire got into the woods, and the wind were in the right direction, the house that was built in just one day would burn down in a good deal *less* time. The log-heap would have to be burned up before I went home. I started it going one night just after the men left, and I spread my blanket in the new house, and proceeded to watch. Even though the wind was away from the house, the heat was so great that it almost scorched the boards. There was no water nearer than twenty or thirty rods, and I was alone in the wilderness. If the wind were to change, my house could not stand a minute. A little after midnight it did change, and the sparks fell on that roof for a little while in a way that was fearful. I had a ladder and one bucket of water. Of course, it was not a very serious matter; but it was dear to my heart, even if the whole thing was not worth more than forty or fifty dollars. Just as I began to fear trouble the raindrops began to patter on that roof. What a joyous thing it was just then to thank God for having answered my prayer in this strange and unexpected way! The contrary wind that came up all of a sudden was probably brought on by the rain that was just behind it.

Just one more little circumstance. After the boys and I had cleared off the ground where we were to plant our peach-trees, somebody suggested we ought to have a floater to make the ground smooth. I suppose I need not tell you what a floater is. There was nothing on the premises that we could draw over that ground, to scrape off the high places and fill up the hollows. Oh! yes, there was. When the carpenters needed a ladder badly I took two light sticks of timber and nailed boards across, making a rough but strong ladder. I told Orville to get his team, and another boy to get the log-chain; and then I hitched the chain so the ladder would go forward with a slant, enabling it to slip by the stumps and obstructions; then I loaded the boys on the ladder, and told Orville to start up. It did beautiful work; but the ground was so uneven and rough, and there were so many roots, it went by jerks, especially when going down hill. Of course, we might have piled logs on the ladder, but we wanted it weighted down in such a way we could take off the weight in going up hill, and put it on in going down. We wanted it weighted down with something that had sense and intelligence. I explained the matter to the boys,

and distributed them along the ladder, and then—what do you suppose? We not only made that orchard look like an onion-bed, but those four boys ha!—well, something I should call *better* than a circus. Sometimes the whole four went over backward in spite of all they could do to hold on; and about as soon as they got back, the next tumble was over in front under the horses' heels. I kept telling them they must hold on tighter. The boys laughed and hurraed till they made the woods ring; and I finally laughed till the tears ran down my cheeks, making furrows, I suppose, through the dust and grime. Oh, yes! when I went up to Michigan I had to wear an overcoat and a muffler and my winter flannels. I had the grip across my chest, rheumatism in my leg, and a cold besides. When I got to work with the boys, after three or four days I was bareheaded (barefooted a part of the time), wore neither coat nor vest, and some of the time I had to remove some of my underclothing. When my feet got sore I bathed them at night in cool running water from that spring, and did not catch cold. I boarded at a farmhouse, and had farmers' fare; was happy and well, without any beefsteak or other things that we get with so little trouble when we live in a town or city.

On Sunday I found a churchful of people, young and old, in Sunday-school. There was no preaching in the middle of the day at Bingham, and not every Sunday in the evening; therefore they generally have an excellent turnout at the Sunday-school, and it rejoiced my heart to see them come from miles around. Yes, and it rejoiced my heart again when the superintendent asked me if I would talk to the children at the close of the lesson. I told them I wanted to talk about two things—fishing and swearing. I asked how many had ever been fishing. In response the boys pretty much all raised their hands. Then I asked how many knew *how* to fish, and the hand of pretty nearly every one in the room went up. Then I told them something about fishing in olden times, and the cast net that Peter was requested to throw on the other side, and which I described on page 355. Then I spoke something as follows:

"Children, I might now take up the other part of my subject and ask how many of you have ever heard swearing. But I do not want to do this. I do not want to know how much swearing there is in this community, for I am almost a stranger. I might ask all those who have ever been tempted to swear to raise their hands; but, God forbid. The subject is too serious and sacred a matter to even ask questions about in this way. Peter was an expert fisherman. It was the business of his life before Jesus found him. The Bible tells us that Peter knew how to swear as well as how to fish. Can anybody tell me how Peter probably learned these awful bad words?"

Somebody replied that Peter had most likely heard *others* swear. And, dear friends, this is the way swearing comes about. The little boys hear the bigger ones swear, or the old men, or the "neighbors." If everybody would stop it, the little boys pretty soon would

not know there was any such thing as swear words. I have been here only four days, and yet I have heard some terrible swearing. A young man was drawing off stones on a stoneboat. He was on a side hill, away up in plain sight, and where everybody could hear him. He drove his team over where the bank was so steep the stoneboat tipped over, and the stones all went rolling to the bottom of the hill. At this he swore just awfully. He seemed to want to let everybody *know* what a bad and wicked heart he had. Now, pretty nearly at the same time, and not far away, another boy (or young man) was also drawing stones and logs and stumps. When he was going after a log, the log-chain caught in a stick, and he called to his horse to stop, and then stooped down to get the end of the stick out of the chain. But the horse started suddenly, without orders. The stick flew up and struck him under his chin, and knocked him down flat in the dirt. I think it must have hurt him considerably. Now, it would have been quite natural for this boy, angered by the pain, to scold at the horse—may be to swear—that is, if he was in the habit of swearing, because the horse started without orders. But this last boy is not a swearing boy. He just looked pleasant and good-natured, and laughed about it. I saw him sprawling in the dirt, and asked him what the matter was, and he told me how it happened. He did not "yell" at his horse, and he did not even talk loud. He took it all as an accident. "Now, children, let us consider a little about that other boy. Whose fault was it that his stoneboat tipped over? Was it the fault of the horse?"

"No, sir."

"Was the stoneboat to blame?"

Some of the children smiled at the idea of a stoneboat being to blame for an accident.

"Well, children, a good many people swear at stoneboats and other inanimate objects. They seem to think it is sensible, and may be smart, to curse things that have no sense or responsibility. You have told me the horses were not to blame for this accident, and the stoneboat was not to blame. Then who was to blame?"

"The boy himself."

Another answer came from another part of the house:

"Mr. Root, the accident was the result of his own carelessness or stupidity."

Then I added:

"Children, people sometimes say swearing does not hurt anybody. It *does* hurt people. It pains everybody who loves righteousness and hates iniquity. It sets a bad example for the younger ones. It is catching, like smallpox and cholera; and I am inclined to believe it is worse than either. It worries the horses. You watch the horses, and see how they look when somebody swears at them. *They* know what swear words mean. More than all, it harms the man who allows himself to yield to the temptation to use such words. First he swears at his team, then he whips and pounds them. Then they get contrary and stubborn, and work is interrupted and hindered. I have sometimes thought that the man who swears

at his team was worth only about half as much as the man who does not swear; and there are some owners of horses who will not have a man on the premises who swears and gets mad at his team, at his stoneboat, or at his work."\*

You may urge it is not so bad to swear at a stoneboat, for that has no feelings; but there is less sense and reason in it than swearing at horses. It is a very bad plan to swear at horses, but not nearly as bad as to swear at your neighbors. The last of our texts says, "Let none of you imagine evil in his heart against his neighbor;" and then it adds, "Love no false oath, for all these are things that I hate, saith the Lord." The man who swears at a stoneboat and at horses will soon swear at his neighbors, especially if he has difficulty with them. Then come blows, lawsuits, penitentiary, and sometimes death. A man not far from where I live quarreled with his neighbor about a division fence. One of them was killed, and the other is now in the penitentiary. Very likely it commenced by the foolish habit of swearing; but before swearing comes, there must be "evil imaginations" in the heart. The swearing only tells to the world, and publishes abroad, the badness of the man's heart. Where the spirit of Christ Jesus rules, there can never be any thing of this kind.

Poor Peter! It may be that he would have never used those very bad and awful words had he not been around where he heard somebody else use them. May God help you, dear children, to keep from this terrible habit. Keep away from it; let it alone just as you would smallpox, cholera, or that terrible malady known as the "black death."



#### FLORIDA TRAVELS, CONTINUED.

My trip *down* the coast was in the night, so I could not get a glimpse of the towns in the vicinity of Miami. Going back, however, I had a better opportunity for doing so. All along the railway from Miami to Palm Beach there are acres and acres of pineapples. These require no sheds—that is, so far as frost is concerned; but they did not show the luxuriance and thrift that we find in smaller plantations, especially those under sheds.

\* It so happened, strangely enough, that, during the week following my Sunday talk, the young man who swore at the stoneboat came to help me. I did not send for him, but a neighbor for whom he was working sent him. He began to swear before my four boys. I remonstrated; but a little later I saw him offering one of the boys some tobacco, telling him he would "never be a man" until he could use tobacco. Do you see, boys, how these things go together! It seems as if each one of you must sooner or later make a choice—a choice either for righteousness or iniquity. Which shall it be? Almost every thing depends on the way you start out. May God help you to choose rightly.

My first stop on my return was at Fort Pierce, the home of Harry Hill, editor of the *American Bee-Keeper*. Friend Hill has been so far away from the editors of the other bee-journals that we have not become acquainted with him, for, as a matter of course, he can not well attend our annual conventions. I found him at work at his hives, and greatly enjoyed talking over the bee-journals, our special industry, and other things. When I got off at Fort Pierce I inquired at the hotel for a bee-keeper named Perry Saunders. The lady at the desk said she did not know any *man* by that name, but there was a little boy there by that name who went to school. A juvenile near by replied, "Oh! that's him, ma. He's got bees and rears queens, and makes lots of money."

When I found friend Hill in his bee-hive workshop, Perry Saunders was also present. When I was introduced, friend Hill remarked that he wouldn't wonder if that boy was the youngest subscriber to GLEANINGS, out of the whole 12,000. Sure enough, he was a little fellow in short pants, but full of enthusiasm. He subscribed for GLEANINGS with his own money, has bought the A B C book, and read it over and over. Just when I met him he was directing his father and a neighbor how to cut the boards for some hives. It was amusing indeed to see this little fellow giving directions to a couple of gray-haired men. Perry had, last season, half a dozen colonies of bees. He has raised queens successfully, and produced quite a crop of honey, and is full of enthusiasm in planning for a larger apiary and more extensive operations during the coming year.

Mr. Hill (like a good many other bee-keepers) is quite an expert in photography, and he has sent us some views of branches of orange-trees, with the foliage and the fruit in natural colors. I believe it was his own coloring. The world has not yet got up to the point of giving us a picture in natural colors that can be printed in bee-journals. When it does, friend Hill will have something rare and fine to show us.

Gifford Station was my next point, and I was pained to find my old friend Harry Gifford suffering from the effects of a gunshot wound. A brief notice of this sad affair is given on page 294. Fortunately, however, friend Gifford was recovering rapidly, expecting to be around again in a few days. He has done quite a little in the way of Florida fruits during the past six years, and is also getting to be quite an extensive bee-keeper, having about half a dozen out-apiaries. Like most bee-keepers he has some peculiar notions of his own. For instance, he says queens should always be sent by mail just as soon as possible after mating, and *before* they begin to lay. He firmly believes that a queen is more or less injured by taking her out of the hive when she is doing her best at egg-laying during the middle of the season. To prove his position he purchased, during the season of 1900, 200 queens of H. G. Quirin, of Parkertown, Ohio. The understanding was that these queens were all to be shipped as nearly as possible before

they began to lay; and he says they gave him better results—that is, considering such a long trip from Ohio to Florida, and that he was satisfied that that is the right way to send queens. This makes a pretty heavy testimonial in favor of my suggestion of several years ago, that all queens should be shipped to purchasers at a low price before they are tested, letting each individual do his own testing.

Friend Gifford furnishes us a fact in bee culture that, so far as I know, has never been recorded before. When saw-palmetto was in full bloom, his whole apiary started off *toward midnight* by moonlight, and actually did a large business for several hours in gathering honey. I forgot to ask him at the time if they labored during the day as usual. There has been quite a little speculation as to whether bees sleep or not. In this case they actually worked both night and day. Perhaps the moon did not come out in full splendor until toward midnight. At any rate, he says they stopped work at dusk as usual; but along toward midnight on two separate occasions, when the honey-yield was very large, the weather sufficiently warm, and the moonlight at its very highest splendor, they actually stored honey by night as well as by day.

The little postmistress that I mentioned on my trip six years ago is still postmistress; but now she is a blooming maiden of 18. I did not find her quite as sociable and communicative at 18 as she was at 12; but she not only knows how to manage Uncle Samuel's business, but she makes such beautiful nice biscuits that they have a reputation in the neighborhood under the name of "Ruby" biscuit. With fresh fish, such as only the Florida homes can furnish, we had a little "spread" that was fit for a king. Her brother, his wife, and Ruby, made up the company. If I am correct, it was here I met another of my happy surprises. Some beautiful-looking sauce was dished out and passed around. It looked a little like cranberries. When I tasted it I uttered an exclamation of surprise and delight.

"Why, what is this new and delicious fruit?"

"Well, Mr. Root, since you seem to like it, suppose you *guess* what sort of fruit it is."

"Why, it looks a little like cranberries; but there are no seeds, and it is certainly more delicate and enticing than cranberries or *any other berry* I ever tasted in my life."

"Mr. Root, it is not a fruit at all, and it is not a berry at all."

You may be sure my curiosity was aroused when they told me it was what is called Jamaica sorrel. It is a plant that is known in catalogs as "Roselle." It is quite common in Florida. The part that is used as a sauce has a sort of fleshy husk inclosing the immature seeds. We gathered some seeds, and I sent them home and had them planted in the greenhouse; but at the present writing only two of them have come up. I feel sure it can be grown all through the North by starting the seeds in a greenhouse (exactly as we do tomatoes, peppers, etc.), and possibly by planting the seeds now in the open ground.



**SOMETHING ABOUT THE FLOWERS IN THAT  
LITTLE GREENHOUSE.**

Quite a few have been wondering if I was not going to have something more to say about "posies." Well, dear friends, I have had a lot in mind to say; but this world is so exceedingly full of wonderful things our journal

with mixed colors (unnamed) for only 20 cts. each, or 3 for 50 cts. I sent for three of them, and along in March they began to bloom. I had no idea these little bits of plants would blossom the first year; but I was greatly surprised—yes, agreeably astonished—to see what even one little azalea could do. I carried one of them all around the factory, and it made about as much excitement (just because it was so little) as the big one did. I asked Ernest to take a photo of it as it stood in the greenhouse in one of the beds. Below is the picture.



A 20-CENT AZALEA, FROM JOHN LEWIS CHILDS, FLORAL PARK, N. Y.

is not half large enough to even hint at them all. A year or more ago I told you about some azaleas growing in pots that I carried around the factory, and made such a breeze among our people, and especially among the girls and women. The azaleas I then mentioned cost about 50 cts. each. They generally sell, in full bloom, for 75 cts. up to \$1.00. Well, last fall, when I got John Lewis Childs' catalog, I was pleased to note that he had azaleas as low as 25 cts. each; yes, and some

Ernest threw his handkerchief over some of the other plants so as to make a background for the azalea. The pot is a three-inch one. The plant has very little foliage, as you will see; and what there is, is almost hidden by the immense flowers. I think there were four on the one little plant. They are larger than a good-sized rose. The delicate coloring and penciling, it seems to me, outrivals the most beautiful rose, and they remain in bloom from ten days to two weeks. I do not know of a

more beautiful plant in the whole floral kingdom than a penciled azalea. It looks as if one had taken a delicate brush, and, with more gorgeous colors than any painter ever mixed, wrought forms of tantalizing beauty. Yes, I could honestly say to the children that this kind of painting and coloring was God's own handiwork. I asked Ernest to take a picture of the azalea alone, but he took in also a magnificent brughmanca; and after I had gone he turned his apparatus on the greenhouse in general, and here it is.

The picture shows you how cheaply the beds and paths are constructed. At the left, overhead, you get a glimpse of the annex we put on last winter. Right below the annex there is a golden-leaved salvia that has been

are six or seven kinds, and all different. Over in another bed, off to the right, not shown, we have a lemon-tree with half a dozen nice lemons on it. A guava from Florida is just full of bloom. It bore one nice fruit that Mrs. Root sampled when I was in Florida. She said it was splendid. In this bed are a great lot of pelargoniums. Our friend Pike, of St. Charles, Ill., sent us an assorted lot of rooted cuttings about a year ago. We planted them outdoors, and got a lot of strong vigorous plants a foot high or more. They were put in the greenhouse last fall, and just grew and grew, without showing any signs of bloom until along in April. Then they just outdid themselves in the multitude of blossoms. They are not only of all colors of the



A GLIMPSE INSIDE OF THE LITTLE GREENHOUSE IN MARCH.

bearing scarlet blossoms, and loads of them, for one whole year continuously, and each blossom contains quite a little drop of honey. Beyond the salvia there are tomatoes. Away over in the corner, at the end of the path, are roses. Right near the roses you can get a glimpse of one of the tiles where we let in water for sub-irrigation. The beds are all watered in the same way. Just beyond the brughmanca there is a clematis that has been bearing beautiful clusters of white flowers all winter. At the right of the big plant, just under one of the great blossoms (nearly if not quite a foot long), there is a bed of fuchsias. These fuchsias have been blooming and blooming all through the latter part of the winter. There

rainbow, but many of them are spotted, speckled, splotched, and penciled, with such a wilderness of beauty as to almost be "wilderness" one.

In the cut showing the azalea, at the right, you can get a faint glimpse of some of the large pelargonium-blossoms. The penciling is so faint, however, that it does not show in the half-tone, although it can be seen very plainly in the photo. They grew in very rich soil with sub-irrigation, and the plant made such a rank growth I presume the blossoms are unusually large. Some single blossoms are an inch and a half across.

The front of the greenhouse is now raised up. When the women-folks go along the

stone walk in front, it is just fun to hear their exclamations at such a variety of new and startling "Lady Washington geraniums" as a good many persist in calling them.

Do you wish to know what is in the annex? Well, we have been so busy that we could not attend to it, and a lot of things came up themselves. Last year we had Burpee's dwarf nasturtiums, and they had their own way, and went to seed. This year the "stertians" came up like weeds all over these beds. The boys pulled up a great lot of them, but some of them escaped long enough to get into bloom, and then they were so pretty the boys hadn't the heart to pull them. Well, they just clambered all over the annex, and now it is just a bank of nasturtium-blossoms.

Now, isn't this enough about the posies for one issue? But it isn't all. I will, however, tell the rest of it in another column, that is, unless the boss printer says he can not possibly find room for any more of my talk about chickens, posies, and gardening.

#### TRAP-LANTERNS, ETC.—A WARNING.

Just now there are several venders of patent moth-traps (for orchards) trying to make out that their trap will take the place of spraying. They even go so far as to tell how inefficient spraying is, how it kills domestic animals, etc., in order that they may better show up the advantages of their trap. I came pretty near saying worthless trap, but it does destroy some insects; but it is just as likely to destroy insects that are a benefit to the farmer as the other kind. Unfortunately these fellows have got one experiment station to give a sort of recommend. See the following, which we clip from the *Country Gentleman*:

Information has just come to me from a fellow-entomologist to the effect that a certain manufacturer of trap-lanterns secured his partial indorsement of his apparatus in a letter which was properly quoted at first; but now, I am informed, the restrictive phrases have been omitted, and the professor is made to appear as though recommending the device for all insects. I wish to state that money invested in trap-lanterns of various forms, including those which have attractive sweet or other fluids, phosphorescent paints and the like, to make them more effective, is a good investment only in a very few special cases; and before buying them, the advice of an entomologist should always be sought. Some of these trap-lanterns catch many insects, most of which, unfortunately, are of comparatively little economic importance, and the trouble is to get a device which will capture large numbers of the destructive species. Extensive experiments at Cornell University have shown that the trap-lantern can not be recommended as a practical means of controlling many insect pests. Beneficial as well as injurious insects are captured, and some pests, like the codling moth, are taken in very small numbers. Farmers are, therefore, advised to go very slow in buying trap-lanterns.

E. P. FELT,  
N. Y. State Entomologist.

Prof. Felt is good authority, and he is, without question, right about the matter.

## Humbugs and Swindles.

On page 410, May 15, 1900, we showed up Prof. Weltmer, of Nevada, Mo., and mentioned that the postal authorities had decided him to be a fraud, and refused to deliver mail to him any longer. I have also since mentioned that he simply started business again under

the name of Joseph H. Kelly, and kept right on. I forwarded several bundles of his advertising matter\* to the Postoffice Department, at Washington, and now we notice by the Henry Co. (Mo.) *Democrat*, of May 3, that both parties are now arrested as frauds. See the following, which we take from the above periodical:

#### MAGNETIC HEALERS FINED.

Kansas City, Mo., April 27.—Stephen A. Weltmer and Joseph H. Kelly, who operated the "American School of Magnetic Healing," at Nevada, Mo., were fined \$1500 each in the federal court. The charge was using the mails for the purpose of fraud, by promising for a consideration to cure persons of poverty and all known bodily ills through absent treatment and mental suggestion.

ARE FINED \$1500 EACH; JUDGE PHILIPS MAKES IT LIGHT ON WELTMER AND KELLY.

Prof. S. A. Weltmer and Joseph H. Kelly, the Nevada "magnetic healers," who pleaded guilty in the United States Court at Kansas City to nine counts of using the mails for fraudulent purposes, were, on the 26th inst., fined \$1500 each by Judge Philips. The maximum punishment was \$5000 fine and a year's imprisonment. The Judge, it will be noticed, made the punishment very light, but the lesson will no doubt cause the "healers" to quit fishing for gullible people in this part of the country.

THEY PLEADED GUILTY; WELTMER AND KELLY THE MAGNETIC HEALERS OF NEVADA ADMIT THE GOVERNMENT'S CHARGES.

The trial of Weltmer and Kelly, the Nevada Magnetic Healers, took place in the United States court in Kansas City this week under the charge of obtaining money through the mail by fraudulent pretenses, to heal by absent treatment, etc.

They plead guilty Tuesday on nine counts, charging violation of the postal laws, and threw themselves on the mercy of the court. Sentence was deferred. It will probably be a heavy fine.

Weltmer and Kelly were doing a business of \$250,000 a year, when the postoffice department issued a fraud order against them, because they advertised to cure by "absent treatment." Their business was so enormous that it raised the Nevada postoffice to first class and made it the best paying office for a town of the size in the United States. Their mail, held up for three weeks, was found to contain \$30,000.

United States Senator Burton, of Kansas, who appeared for the healers, admitted that they had violated the law, but declared their motives were good. "They are on a par with Christian Scientists and divine healers, who cure by suggesting health instead of disease," he said. Senator Burton pleaded for leniency for his clients, on the further ground that the advertisements on which they were convicted were written by a St. Louis agency, without suggestion by Weltmer or Kelly, which, to say the least, smacks of downright prevarication, and is too contemptible to deceive any one. Such talk shows a disposition to crawl through a very small hole.

It seems to me this is a very light sentence. What is \$1500 to a fraudulent institution that is swindling people to the extent of \$250,000 a year? It reminds me of the way the saloon-keepers are fined. They simply laugh at the matter, hand over the cash, and go right on doing business. I hope, however, the United States courts will give these fellows to understand that they are no longer to be trifled with.

\* Perhaps I might explain that I corresponded with the "American Institute of Science" at Nevada, Mo., in regard to terms for being taught "magnetic healing." At first they wanted quite a sum of money for teaching this wonderful art. After a little time, as I did not reply (I sent them no money), they offered to come down a half, owing to some peculiar circumstances. Later still there came another proposition to the effect that, if I would send them the money before a certain date, they would make a still further and most wonderful concession, telling me I could easily make from \$5 to \$25 a day, etc. Many of you probably know the lingo.



#### NO CHANGE IN CLASSIFICATION OF COMB HONEY.

We learn just as we go to press that the Western Classification Committee, at their recent meeting in Monterey, Cal., after full consideration, made no change in the classification of comb honey.

#### BEEWAX MORE PLENTIFUL.

As we have a good supply of beeswax, and it is being offered more freely, we mark down the price we pay one cent a pound, and will likely reduce further by the middle of June. Price we pay now will be 27 cents cash, or 29 in trade for average wax delivered here.

#### NEW ROOT ZINC.

We have been making new zincs and punches for our Root zinc-perforating machine during the past few months, and are just starting them in operation. The perforations have round end holes like the Tinker zinc, and the holes are a little longer than the Tinker and almost as close together, so that our new Root zinc will be just as accurate and perfect as Tinker zinc. Send for sample if interested.

#### GERMAN WAX-PRESS.

We are bringing out a new wax-extractor which we shall call the German wax-press. We hope to have an illustration to present in next issue. It is very strongly made of No. 20 galvanized iron, 16 inches diameter, 24 inches high, with heavy wire-cloth basket, holding about a bushel of combs, and with galvanized cast-iron cover, plunger, and basket-support. Price for introduction, \$7.50.

#### HAMMOND BEE-BRUSHES.

On another page we illustrate a new bee-brush manufactured by a bee-keeper in Southern Ohio, who is also a brush-maker. We have for the present three grades of material in these brushes—tampico at 50c.; horsetail hair at 65c.; Russian bristle at 80c. By mail, 10c each extra for packing and postage. After testing them this season we shall no doubt decide upon one grade only. The hair or bristle brushes will probably be much more desirable than the tampico.

### Special Notices by A. I. Root.

#### JAMAICA SORREL—THE NEW FRUIT.

We have just received ½ lb of good seed from a seedhouse in Florida, and are going to give it a good test; if you want to help us make the test, send for a five-cent package. See p. 484.

#### BOOKS ON GINSENG CULTURE, ETC.

If any of our readers sent \$1.00 for the book on ginseng culture, advertised in our last issue, we will make good what they are out of pocket if the advertiser refuses to take the book and refund. The advertisement would never have been received had we seen the "book" before inserting it.

#### NICE SEED POTATOES TO BE GIVEN AWAY TO THE READERS OF GLEANINGS.

We still have about 300 bushels more than we shall need to plant, to be given away to our patrons, as described on page 452 of our last issue. The greater part of them are Early Ohio, celebrated Red River stock. Our own potatoes, most of them, will be planted during this month of June; and we rather prefer the latter part of June to the fore part. We still have every thing in the table except Early Trumbull, New Queen, Lee's Favorite, Twentieth Century, and New Craig.

**EGG FOOD!** The kind that tones and keeps up the hen so that she simply must lay. LEY'S POULTRY CONDITION POWDER puts good red blood into poultry veins; kills all disease germs; tones and nourishes fowls—big and little get all there is in the food when fed in conjunction with it. Price 25c pkg.; 5 for \$1. Ley's Thoroughbred Minorca eggs, \$1 for 13. Thoroughbred Belgian Hares. Geo. J. Ley, Florence, California.



## Tar Heel Apiaries!

THE BEST BEES KNOWN  
IN : AMERICA : TO-DAY.

### American Albino Italians.

They have no superiors and few equals, as hundreds of bee-keepers testify. Untested queens, \$1.00; 6 \$5.00. Tested queens, \$2.00 each. Choice breeders, \$5.00 to \$10.00. Nuclei, 75c per L. frame—add price of queen. 200 3-frame (L.) nuclei for sale in May and June. Safe delivery insured always.

Swinson & Boardman, Box 358, Macon, Ga.

**FRUIT-CANNING** made easy and sure by using Coddington's Self-melting. Self-sealing Wax Strings. Very convenient and economical. Inquire of your dealer or send me his name and 45c in stamps for 100 strings, by mail. Mention this paper. C. C. FOUTS, Middletown, Ohio.

**For Sale.** Choice prolific Italian queens—grand-daughters of a queen of which Doolittle wrote me, "I \$100 will not buy her"—mated with drones of Hutchinson's Superior Long-tongue Strain. Warranted queens, 75c; tested, \$1.00 and up. Good references, and satisfaction guaranteed.

EARL Y. SAFFORD, Salem, N. Y.

**FOR SALE.**—20 strong colonies of long-tongued strictly pure Italians with tested queens, and in new light chaff eight-frame hives, combs in Hoffman wired frames. Price \$6.50 including hive; \$5 per colony without hive, or five colonies at \$20.

W. C. KISTLER, Rutherford, N. J.

**FOR SALE CHEAP.**—California bee ranch and 500 colonies of bees. Write for particulars, price, and easy terms. I. A. KING, Almond, San Diego Co., Cal.

**WANTED.**—A purchaser for a second-hand ten-inch Root comb-foundation mill in good condition. Price \$10. Also for sale about 50 second-hand hives, 10 L. frame. Also many other fixtures for an apiary.

W. H. BIRNEY, Nelson, N. Y.

## Wants and Exchange.

**WANTED.**—To exchange 50M polished sections (No. 1, nice) for beeswax, at a bargain.

W. H. NORTON, Skowhegan, Me.

**WANTED.**—To exchange two ladies' bicycles—but little used and high grade—for offers.

J. W. PROVAN, Traer, Iowa.

**WANTED.**—To exchange first-class bee-keeping supplies for 2000 lbs. beeswax. Will allow 32c for nice wax.

W. H. NORTON, Skowhegan, Me.

**WANTED.**—To exchange a 100-chick hot-air brooder—in good condition, used only once—for three colonies of Italian bees in 8-frame dovetailed hive, on wire Hoffman frames. Also 350-egg incubator for Cowan extractor.

M. M. WYANT,  
18 Bergen St., Hackensack, New Jersey.

**WANTED.**—To exchange Japanese buckwheat at 80c per bu.—sacks, 15c extra—for bees in shipping-boxes, if not too far away.

ALBERT L. MARTIN, Leonardsburg, Del. Co., O.

**WANTED.**—To exchange a \$50 Columbia bicycle that has not been ridden 100 miles; never been rained on; out of the factory only about one year. I will sell it or exchange for clover honey, or two-frame Cowan extractor and new Dovetailed hives, to the value of \$35.

A. H. KANAGY, Milroy, Pa.

**WANTED.**—A young man or married man, to work with 50 to 100 colonies of bees, and work on fruit-farm the rest of his time. Good position to right man. Want one that likes to work with bees; don't care if he doesn't know so much about them, as I have my own method. Good house and plenty of fruit free to married man.

J. A. TAYLOR, Wynnewood, Ind. Ter.